

Abstract of the Disclosure

A mobile communication apparatus and method using backscattering of a carrier is provided. The mobile communication apparatus includes a mobile station including a mobile station communication controller for processing data including control data to output a predetermined data frame, a mobile station source coder for receiving the data frame and performing source coding on it according to a predetermined coding method to output coded data, a first modulator for receiving a first carrier having a predetermined frequency and modulating the coded signal from the mobile source coder using the first carrier to generate a first modulated signal, a second modulator for receiving a second carrier having a predetermined frequency and performing modulation on the first modulated signal using the second carrier to generate a modulated uplink signal, a mobile station interfacser for transmitting the modulated uplink signal to the base station and receiving a modulated downlink signal from the base station, a first demodulator for receiving and demodulating the modulated downlink signal received from the base station via the mobile station interfacser and outputting demodulated data, and a mobile station source decoder for performing source decoding on the demodulated data from the first demodulator to convert the demodulated data to a baseband signal. Accordingly, high speed data communication can be realized, and the necessity of a special data pattern necessary for frame synchronization can be removed. Since the mobile station performs amplitude shift keying (ASK) modulation using a carrier received from a base station after performing differential phase shift keying (DPSK) modulation, it does not require a separate oscillator so that hardware configuration can be simplified. Consequently, the mobile station can be economically manufactured.

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